

[<sup>F1</sup>][<sup>F2</sup>ANNEX I BREQUIREMENTS FOR CONSTRUCTION,  
TESTING, INSTALLATION AND INSPECTION**Textual Amendments**

- F1** Inserted by Council Regulation (EC) No 2135/98 of 24 September 1998 amending Regulation (EEC) No 3821/85 on recording equipment in road transport and Directive 88/599/EEC concerning the application of Regulations (EEC) No 3820/85 and (EEC) No 3821/85.
- F2** Substituted by Commission Regulation (EC) No 1360/2002 of 13 June 2002 adapting for the seventh time to technical progress Council Regulation (EEC) No 3821/85 on recording equipment in road transport (Text with EEA relevance).

## II.GENERAL CHARACTERISTICS AND FUNCTIONS OF THE RECORDING EQUIPMENT

Any vehicle fitted with the recording equipment complying with the provisions of this Annex, must include a speed display and an odometer. These functions may be included within the recording equipment.

## 1. General characteristics

The purpose of the recording equipment is to record, store, display, print, and output data related to driver activities.

The recording equipment includes cables, a motion sensor, and a vehicle unit.

[<sup>F3</sup>The interface between motion sensors and vehicle units shall be compliant with ISO 16844-3:2004, Cor 1:2006.]

**Textual Amendments**

- F3** Inserted by Commission Regulation (EU) No 1266/2009 of 16 December 2009 adapting for the tenth time to technical progress Council Regulation (EEC) No 3821/85 on recording equipment in road transport (Text with EEA relevance).

The vehicle unit includes a processing unit, a data memory, a real time clock, two smart card interface devices (driver and co-driver), a printer, a display, a visual warning, a calibration/downloading connector, and facilities for entry of user's inputs.

The recording equipment may be connected to other devices through additional connectors.

Any inclusion in or connection to the recording equipment of any function, device, or devices, approved or otherwise, shall not interfere with, or be capable of interfering with, the proper and secure operation of the recording equipment and the provisions of the Regulation.

Recording equipment users identify themselves to the equipment via tachograph cards.

The recording equipment provides selective access rights to data and functions according to user's type and/or identity.

The recording equipment records and stores data in its data memory and in tachograph cards.

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*Changes to legislation: There are currently no known outstanding effects for the Council Regulation (EEC) No 3821/85, Division II.. (See end of Document for details)*

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This is done in accordance with Directive 95/46/EC of 24 October 1995 on the protection of individuals with regard to the processing of personal data and on the free movement of such data<sup>(1)</sup>.

## 2. Functions

The recording equipment shall ensure the following functions:

- monitoring cards insertions and withdrawals,
- speed and distance measurement,
- time measurement,
- monitoring driver activities,
- monitoring driving status,
- drivers manual entries:
  - entry of places where daily work periods begin and/or end,
  - manual entry of driver activities,
  - entry of specific conditions,
- company locks management,
- monitoring control activities,
- detection of events and/or faults,
- built-in and self tests,
- reading from data memory,
- recording and storing in data memory,
- reading from tachograph cards,
- recording and storing in tachograph cards,
- displaying,
- printing,
- warning,
- data downloading to external media,
- output data to additional external devices,
- calibration,
- time adjustment.

## 3. Modes of operation

The recording equipment shall possess four modes of operation:

- operational mode,
- control mode,
- calibration mode,
- company mode.

The recording equipment shall switch to the following mode of operation according to the valid tachograph cards inserted into the card interface devices:

Mode of operation		Driver slot				
		No card	Driver card	Control card	Workshop card	Company card
Co-driver slot	No card	Operational	Operational	Control	Calibration	Company

<sup>a</sup> In these situations the recording equipment shall use only the tachograph card inserted in the driver slot.

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<b>Driver card</b>	Operational	Operational	Control	Calibration	Company
<b>Control card</b>	Control	Control	Control <sup>a</sup>	Operational	Operational
<b>Workshop card</b>	Calibration	Calibration	Operational	Calibration <sup>a</sup>	Operational
<b>Company card</b>	Company	Company	Operational	Operational	Company <sup>a</sup>

**a** In these situations the recording equipment shall use only the tachograph card inserted in the driver slot.

The recording equipment shall ignore non-valid cards inserted, except displaying, printing or downloading data held on an expired card which shall be possible.

All functions listed in II.2. shall work in any mode of operation with the following exceptions:

- the calibration function is accessible in the calibration mode only,
- the time adjustment function is limited when not in the calibration mode,
- the company locks management function is accessible in the company mode only,
- the monitoring of control activities function is operational in the control mode only,
- <sup>F5</sup>the downloading function is not accessible in the operational mode (except as provided for in Requirement 150), and except downloading a driver card when no other card is inserted into the VU.]

#### Textual Amendments

- F4** Deleted by [Commission Regulation \(EU\) No 1266/2009 of 16 December 2009 adapting for the tenth time to technical progress Council Regulation \(EEC\) No 3821/85 on recording equipment in road transport \(Text with EEA relevance\)](#).
- F5** Substituted by [Commission Regulation \(EU\) No 1266/2009 of 16 December 2009 adapting for the tenth time to technical progress Council Regulation \(EEC\) No 3821/85 on recording equipment in road transport \(Text with EEA relevance\)](#).

The recording equipment can output any data to display, printer or external interfaces with the following exceptions:

- in the operational mode, any personal identification (surname and first name(s)) not corresponding to a tachograph card inserted shall be blanked and any card number not corresponding to a tachograph card inserted shall be partially blanked (every odd character — from left to right — shall be blanked),
- <sup>F5</sup>in the company mode, driver related data (requirements 081, 084 and 087) can be output only for periods where no lock exists or no other company holds a lock (as identified by the first 13 digits of the company card number),]
- when no card is inserted in the recording equipment, driver related data can be output only for the current and eight previous calendar days.

#### 4. Security

The system security aims at protecting the data memory in such a way as to prevent unauthorised access to and manipulation of the data and detecting any such attempts, protecting the integrity and authenticity of data exchanged between the motion sensor and the vehicle unit, protecting the integrity and authenticity of data exchanged between the recording equipment and the tachograph cards, and verifying the integrity and authenticity of data downloaded.

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In order to achieve the system security, the recording equipment shall meet the security requirements specified in the motion sensor and vehicle unit generic security targets (Appendix 10).]]

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**Changes to legislation:** There are currently no known outstanding effects for the Council Regulation (EEC) No 3821/85, Division II.. (See end of Document for details)

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(1) [<sup>F1</sup>[<sup>F2</sup>OJ L 281, 23.11.1995, p. 31.]]

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**Changes to legislation:**

There are currently no known outstanding effects for the Council Regulation (EEC) No 3821/85, Division II..